

signaling network for carrying signaling information relevant to the establishment of call paths on said traffic carrying network;

a method of processing an incoming call directed to a specified subscriber telephone line on said traffic carrying network, said specified subscriber telephone line initially in-use to connect a data terminal to a data network, said method comprising:

- a. receiving a signaling message from said signaling network generated in response to said incoming call, said received signaling message received prior to establishment of a call path for said incoming call on said traffic carrying network;
- b. in response to said received signaling message, dispatching a first data message indicative of said incoming call to said data terminal on said data network by way of said traffic carrying network and said specified subscriber telephone line.

22.(new) The method of claim 21, further comprising:

- c. receiving a second data message from said data terminal, said second data message indicative of a call disposition response provided to said data terminal.

23.(new) The method of claim 22, further comprising:

- d. in response to receiving said second data message, dispatching a signaling message on said signaling network to establish a call path between said incoming call and said specified subscriber telephone line on said traffic carrying network.

24.(new) The method of claim 21, wherein said signaling network comprises an intelligent network, and wherein said received signaling message is received from a processing element forming part of said signaling network.

25.(new) The method of claim 22, wherein said received signaling message comprises a telephone dial number identifying said specified subscriber telephone line.

26.(new) The method of claim 25, wherein said received signaling message comprises at least one of a dial number associated with an originator of said incoming call and a name associated with an originator of said incoming call. *caller id*

27.(new) The method of claim 21, wherein said data network comprises an internet protocol compliant network, and wherein said first data message comprises a internet protocol compliant message.

28.(new) The method of claim 26, wherein said first data message comprises at least one of a dial number associated with an originator of said incoming call and a name associated with an originator of said incoming call. *caller id*

29.(new) A notification server comprising:

a first interface for connection of said server to a telephony signaling network, said signaling network for carrying signaling information relevant to the establishment of call paths on a switched traffic carrying telephony network, said first interface adapted to receive signaling messages prior to establishment of associated call paths on said traffic carrying telephony network;

a second interface for connection of said server to a data network;

a processor operable to

- a. receive a signal indicative of an incoming call originating with a caller to a specified telephone line on said traffic carrying telephony network, by way of said signaling network;
- b. in response to receiving said signal, dispatch a data message indicative of said incoming call to a terminal in communication with said data network, by way of said specified telephone line.

30.(new) The notification server of claim 29, wherein said processor is further operable to receive a call disposition response message from said data terminal by way of said data network.

31.(new) The notification server of claim 30, wherein said processor is further operable to dispatch a signaling message to said signaling network to establish a path on said traffic carrying telephony network between said caller and said specified subscriber line, in response to receiving said call disposition response message.

32.(new) The notification server of claim 29, wherein said signaling network comprises an advanced intelligent network (AIN) and said first interface comprises an interface to said AIN.

33.(new) The notification server of claim 29, wherein said data message comprises an internet protocol compliant message.

34.(new) The notification server of claim 30, wherein said processor is further operable to dispatch a signaling message to said signaling network to establish a call path between said caller and a voice mail server, in response to receiving said call disposition response message.

35.(new) The notification server of claim 30, wherein said processor is further operable to dispatch a signaling message to said signaling network to establish a call

path between said caller and a second subscriber telephone line, on said traffic carrying network, in response to receiving an appropriate call disposition signal.

36.(new) A service control point (SCP) for use in an advanced intelligent network (AIN) forming part of a switched telephone network, said SCP configured to dispatch a signaling message to a data network gateway interconnected to a data network, in response to receiving an AIN signal indicative of an incoming call to a specified telephone subscriber line in-use to connect a data terminal to said data network.

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37.(new) A switching point, within a telephony signaling network, said signaling network for carrying signaling information relevant to the establishment of call paths on a traffic carrying telephony network, said switching point operable to dispatch a signal on said signaling network in response to an incoming call directed to a specified subscriber telephone line in use to connect a data terminal to a data network using said traffic carrying telephony network, said signal dispatched prior to establishing a path for said incoming call on said traffic carrying network.

38.(new) The switching point of claim 37, wherein said signaling network comprises an advanced intelligent network (AIN), and wherein said signal comprises an AIN termination attempt message.

39.(new) The switching point of claim 38, wherein said switching point is operable to generate said signal in response to an AIN termination attempt trigger generated at said switching point.

40.(new) A processing element for interconnection with a communications signaling network carrying signals relevant to establishing call paths on a traffic carrying telephone network, said processing element comprising:

a first interface for connecting said processing element with said signaling network in communication with a switch on said traffic carrying telephone network;

a second interface for connecting said processing element with a data network gateway for dispatching data messages on a data network; said processing element operable to dispatch a first message to said data network gateway by way of said second interface in response to receiving a signal by way of said first interface, said signal indicative of an incoming call to a specified telephone subscriber line in-use connecting a data terminal to said data network by way of said traffic carrying telephone network.

41.(new) The processing element of claim 40, further operable to

dispatch a signaling message on said first interface to establish a call path between said incoming call and said specified telephone subscriber line, in response to receiving an appropriate call disposition signal from said data network gateway on said second interface.

42.(new) The processing element of claim 40, further operable to

dispatch a signaling message on said first interface to establish a call path between said incoming call and a second subscriber telephone line, on said traffic carrying telephone network in response to receiving an appropriate call disposition signal from said data network gateway on said second interface.

43.(new) The processing element of claim 40, further operable to

dispatch a signaling message on said first interface to establish a call path between said incoming call and a voice mail system, on said traffic carrying network in response to receiving an appropriate call disposition signal from said data network gateway on said second interface.

44.(new) The processing element of claim 40, wherein said first interface comprises an advanced intelligent network (AIN) interface, and wherein said signal comprises an AIN signal.

45.(new) The processing element of claim 44, wherein said signal comprises an AIN call termination attempt message.

46.(new) The processing element of claim 45, wherein said AIN call termination attempt message comprises a telephone dial number identifying said subscriber line.

47.(new) The processing element of claim 46, wherein said AIN call termination attempt message comprises an identifier of an originator of said call, including at least one of a name and dial number associated with said call.

48.(new) The processing element of claim 47, wherein said first message comprises at least one of said name and said dial number.

49.(new) The processing element of claim 40, wherein said processing element is further operable to monitor a voice mail server associated with said specified subscriber telephone line, by way of said signaling network, and to provide a signal to said data network gateway indicative of a message waiting for said specified subscriber telephone line, at said voice mail server.

50.(new) In a switched telephone network comprising:

a first switch;

a first signal switching point associated with said first switch;

a second switch;

a second signal switching point associated with said second switch;

a processing element in communication with said second signal switching point;

said first signal switching point, said second signal switching point and said processing element interconnecting in a telephony signaling network;

a method of dispatching a message indicative of an incoming call, ✓  
originating with a caller interconnected with said first switch to a subscriber line interconnected with said second switch, to a terminal in communication with a data network, said method comprising:

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- a. dispatching a first signaling message from said first signaling point to said second signaling point;
  - b. ✓ in response to said first signaling message, dispatching a second signaling message from said second signaling point to said processing element;
  - c. ✓ in response to said second signaling message, dispatching a third signaling message from said processing element to said data network gateway; ✓
  - d. ✓ in response to said third signaling message, dispatching a data message from said network gateway over said data network to said data terminal.

51.(new) The method of claim 50, wherein said signaling network comprises an intelligent network, and wherein said second signaling message comprises a termination attempt message.

52.(new) The method of claim 51, wherein said second signaling message is dispatched prior to establishing a call path to said second switch for said incoming call.